

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. *(Currently Amended)* A light diffusing plate comprising:
an unresolvable structure which has an optical refractive power and includes light transmitting spheres;
individual passing areas through which a collimated light incident from a side of the unresolvable structure passes;
a low-passing area other than said passing areas, which has relatively low light transmissivity compared with the passing areas, said passing areas and low-passing area being provided in a same plane; and
a binder adhered to at least a circumferential portion of said spheres, said circumferential portion is part of a half of said spheres which faces said plane,
wherein said individual passing areas respectively correspond to said light transmitting spheres and are separated by said low-passing area, such that portions of said passing areas and a portion of said low-passing area are disposed past said spheres in a passing direction of the collimated light, said low passing area being darker than said passing areas.

2. *(Previously Presented)* The light diffusing plate according to claim 1, wherein the light diffusing plate comprises a light transmitting support; and

a diffusing layer formed on said light transmitting support;

wherein said light transmitting spheres are fixed to the light transmitting support with said binder, which is light absorptive binder and constitutes a portion of said low-passing area.

3. *(Previously Presented)* A light diffusing plate, comprising:

a light transmitting support;

a diffusing layer having light transmitting spheres; and

a light-sensitive thermal developable material layer which is formed between said light transmitting support and the diffusing layer;

wherein said light-sensitive thermal developable material layer contains a light-sensitive thermal developable material which has colorless areas; and

wherein said light-sensitive thermal developable material has colored areas formed by being heated after nearly collimated light is incident from said diffusing layer side.

4. *(Previously Presented)* A light diffusing plate comprising:

a light transmitting support;

a diffusing layer having light transmitting spheres; and

a thermal ablative layer between said light transmitting support and the diffusing layer;

wherein said thermal ablative layer contains a light absorptive thermal ablative material;

wherein said layer of thermal ablative material has intermittent areas where said thermal ablative material has been removed; and

wherein said intermittent areas where said thermal ablative material has been removed correspond to said light transmitting spheres and are separated by non-removed areas of said thermal ablative material, such that a portion of said removed area and portions of said non-removed areas are disposed past said spheres in a direction of the collimated light.

5. *(Previously Presented)* A light diffusing plate comprising:

a light transmitting support;

a diffusing layer containing light transmitting spheres; and

a contacting material which contacts said light transmitting spheres;

wherein said contacting material contains a light-sensitive material which has a colorless exposed area and a light absorptive material; and

wherein said light-sensitive material also has colored areas that are formed from being heated and developed after nearly collimated light is incident from a side of said diffusing layer.

6. *(Previously Presented)* A light diffusing plate comprising:

a light transmitting support;

a diffusing layer containing light transmitting spheres;

a contacting material which contacts said light transmitting spheres and contains a light absorptive material; and

a light-sensitive material which has a colorless exposed area and is provided between said contacting material and said light transmitting support;

wherein said light-sensitive material also has colored areas that are formed from being heated and developed after nearly collimated light is incident from a side of said diffusing layer.

7. *(Currently Amended)* The light diffusing plate according to claim 3, wherein said diffusing layer is formed by forming a layer of ~~[[said]]~~ a contacting material previously and then embedding said light transmitting spheres into the layer of the contacting material.

8. *(Currently Amended)* The light diffusing plate according to claim 4, wherein said diffusing layer is formed by forming a layer of ~~[[said]]~~ a contacting material previously and then embedding said light transmitting spheres into the layer of the contacting material.

9. *(Original)* The light diffusing plate according to claim 5, wherein said diffusing layer is formed by forming a layer of said contacting material previously and then embedding said light transmitting spheres into the layer of the contacting material.

10. *(Original)* The light diffusing plate according to claim 6, wherein said diffusing layer is formed by forming a layer of said contacting material previously and then embedding said light transmitting spheres into the layer of the contacting material.

11. *(Original)* The light diffusing plate according to claim 2, wherein a surface of an opposite side to said diffusing layer in said light transmitting support is treated with light non-reflection processing.

12. *(Original)* The light diffusing plate according to claim 3, wherein a surface of an opposite side to said diffusing layer in said light transmitting support is treated with light non-reflection processing.

13. *(Original)* The light diffusing plate according to claim 4, wherein a surface of an opposite side to said diffusing layer in said light transmitting support is treated with light non-reflection processing.

14. *(Original)* The light diffusing plate according to claim 5, wherein a surface of an opposite side to said diffusing layer in said light transmitting support is treated with light non-reflection processing.

15. *(Original)* The light diffusing plate according to claim 6, wherein a surface of an opposite side to said diffusing layer in said light transmitting support is treated with light non-reflection processing.

16. (*Currently Amended*) A display apparatus comprising:

a liquid crystal display panel;

a backlight unit which forces a collimated light to be incident on said liquid crystal display panel; and

a light diffusing plate which is located in an opposite side of said backlight unit against said liquid crystal display panel, said light diffusing plate comprises an unresolvable structure which has an optical refractive power and includes light transmitting spheres, passing areas through which a collimated light incident from a side of the unresolvable structure passes, and a low-passing area other than said passing areas, which has relatively low light transmissivity compared with the passing areas, said passing areas and low-passing area being provided in a same plane; and

a binder adhered to at least a circumferential portion of said spheres, said circumferential portion is part of a half of said spheres which faces said plane,

wherein said passing areas correspond to said structure having optical refractive power and are separated from each other by said low-passing area, such that portions of said passing areas and a portion of said low-passing area are disposed past said structure having optical refractive power in a passing direction of the collimated light, said low passing area being darker than said passing areas.

17. *(Previously Presented)* A display apparatus comprising:

a liquid crystal display panel;

a backlight unit which forces a collimated light to be incident on said liquid crystal display panel; and

a light diffusing plate which is located in an opposite side of said backlight unit against said liquid crystal display panel;

wherein said light diffusing plate comprises a light transmitting support, a diffusing layer having light transmitting spheres, and a light-sensitive thermal developable material layer which is formed between said light transmitting support and the diffusing layer;

wherein said light-sensitive thermal developable material layer contains a light-sensitive thermal developable material which has a colorless exposed area; and

wherein said light-sensitive thermal developable material has colored areas formed by being heated after nearly collimated light is incident from said diffusing layer side.

18. *(Previously Presented)* A display apparatus comprising:

a liquid crystal display panel;

a backlight unit which forces a collimated light to be incident on said liquid crystal display panel; and

a light diffusing plate which is located in an opposite side of said backlight unit against said liquid crystal display panel;

wherein said light diffusing plate comprises a light transmitting support, a diffusing layer having light transmitting spheres, and a thermal ablative layer formed between said light transmitting support and the diffusing layer;

wherein said thermal ablative layer contains a light absorptive thermal ablative material;

wherein said thermal ablative layer has intermittent areas where said thermal ablative material has been removed; and

wherein said intermittent areas where said thermal ablative material has been removed correspond to said light transmitting spheres and are separated by non-removed areas of said thermal ablative material, such that a portion of said removed area and portions of said non-removed areas are disposed past said spheres in a direction of the collimated light.

19. *(Previously Presented)* A display apparatus comprising:

a liquid crystal display panel;

a backlight unit which forces a collimated light to be incident on said liquid crystal display panel; and

a light diffusing plate which is located in an opposite side of said backlight unit against said liquid crystal display panel;

wherein said light diffusing plate comprises a light transmitting support, a diffusing layer containing light transmitting spheres, and a contacting material which contacts said light transmitting spheres;

wherein said contacting material contains a light-sensitive material which has a colorless exposed area and a light absorptive material; and

wherein said light-sensitive material also has colored areas that are formed from being heated and developed after nearly collimated light is incident from a side of said diffusing layer.

20. *(Previously Presented)* A display apparatus comprising:

a liquid crystal display panel;

a backlight unit which forces a collimated light to be incident on said liquid crystal display panel; and

a light diffusing plate which is located in an opposite side of said backlight unit against said liquid crystal display panel;

wherein said light diffusing plate comprises a light transmitting support, a diffusing layer containing light transmitting spheres, a contacting material which contacts said light transmitting spheres and contains a light absorptive material, and a light-sensitive material which has a colorless exposed area and is provided between said contacting material and said light transmitting support; and

wherein said light-sensitive material also has colored areas that are formed from being heated and developed after nearly collimated light is incident from a side of said diffusing layer.

21. (*Currently Amended*) An image display apparatus comprising:

an image display device having a matrix structure; and

a light diffusing plate comprising:

an unresolvable structure which has an optical refractive power and includes light transmitting spheres;

individual passing areas through which a collimated light incident from a side of the unresolvable structure passes; and

a low-passing area other than said passing areas, which has relatively low light transmissivity compared with the passing areas, said passing areas and low-passing area being provided in a same plane; and

a binder adhered to at least a circumferential portion of said spheres, said circumferential portion is part of a half of said spheres which faces said plane,

wherein said light diffusing plate is provided on a viewing side of a display screen of said image display device, and

wherein said passing areas correspond to said structure having optical refractive power and are separated from each other by said low-passing area, such that portions of said passing areas and a portion of said low-passing area are disposed past said structure having optical refractive power in a passing direction of the collimated light, said low passing area being darker than said passing areas.

22. *(Previously Presented)* The image display apparatus according to claim 21, wherein said light diffusing plate comprises a light transmitting support and a diffusing layer formed by coupling light transmitting spheres with said binder to the light transmitting support.

23. *(Previously Presented)* The image display apparatus according to claim 21, further comprising a preventing sheet which prevents extraneous light from being scattered;

wherein said preventing sheet is provided on the light diffusing plate which is provided on said viewing side of said display screen.

24. *(Currently Amended)* An image display apparatus comprising:
an image display device having a matrix structure; and
~~a light transmitting support;~~
a light diffusing plate comprising:
a light transmitting support;
an unresolvable structure having light transmitting spheres through which collimated light passes, and which ~~[[have]]~~ has an optical refractive power;
a binder which fixes said light transmitting spheres in place, and said binder is adhered to at least a circumferential portion of said spheres, said circumferential portion is part of a half of said spheres where the collimated light exits; and

a layer of material having intermittent areas where light transmissivity is greater than other areas in said layer, said layer disposed ~~passed~~ past said spheres in a passing direction of the collimated light,

wherein said light diffusing plate is provided on a viewing side of a display screen of said image display device.

25. *(Cancelled)*

26. *(Previously Presented)* The image display apparatus according to claim 24, further comprising a preventing sheet for preventing from scattering an extraneous light;

wherein said preventing sheet is provided on the light diffusing plate which was provided on said viewing side of said display screen.

27. *(Previously Presented)* The display apparatus according to claim 16, further comprising a preventing sheet which prevents extraneous light from being scattered;

wherein said preventing sheet is provided on the light diffusing plate which is provided on a viewing side of a display screen of said liquid crystal display panel.

28. *(Previously Presented)* The display apparatus according to claim 17, further comprising a preventing sheet which prevents extraneous light from being scattered;

wherein said preventing sheet is provided on the light diffusing plate which is provided on a viewing side of a display screen of said liquid crystal display panel.

29. *(Previously Presented)* The display apparatus according to claim 18, further comprising a preventing sheet which prevents extraneous light from being scattered;

wherein said preventing sheet is provided on the light diffusing plate which is provided on a viewing side of a display screen of said liquid crystal display panel.

30. *(Previously Presented)* The display apparatus according to claim 19, further comprising a preventing sheet which prevents extraneous light from being scattered;

wherein said preventing sheet is provided on the light diffusing plate which is provided on a viewing side of a display screen of said liquid crystal display panel.

31. *(Previously Presented)* The display apparatus according to claim 20, further comprising a preventing sheet which prevents extraneous light from being scattered;

wherein said preventing sheet is provided on the light diffusing plate which is provided on a viewing side of a display screen of said liquid crystal display panel.

32. (*New*) A production method of producing a light diffusing plate that comprises a light transmitting support, an unresolvable structure which has an optical refractive power and includes light transmitting spheres, individual passing areas through which a collimated light incident from a side of the unresolvable structure passes, a low-passing area other than said passing areas, which has relatively low light transmissivity compared with the passing areas, and a binder adhered to at least a circumferential portion of said spheres, comprising the steps of:

preparing a paint by mixing materials of said passing areas and low-passing area;

applying simultaneously said paint on the light transmitting support in such a way that said passing areas and low-passing area are provided in a same plane on the light transmitting support and said circumferential portion of said spheres is part of a half of said spheres which faces said plane; and

drying or curing said applied paint.

33. (*New*) The production method according to claim 32, wherein
said materials of said passing areas and low-passing area are said spheres and said binder which is a light absorptive binder, respectively,

said prepared paint is obtained by dispersing said binder with said spheres, and

said dried or cured paint is formed on said light transmitting support as a diffusing layer in which said light transmitting spheres which constitute said passing areas, respectively, are fixed to the light transmitting support with said binder which constitutes a portion of said low-passing area.

34. *(New)* A light diffusing plate, comprising:

- a light transmitting support;
- an unresolvable structure which has an optical refractive power and includes light transmitting spheres disposed on or contacted to said light transmission support;
- individual passing areas through which a collimated light incident from a side of the unresolvable structure passes;
- a low-passing area other than said passing areas, which has relatively low light transmissivity compared with the passing areas, said passing areas and low-passing area being provided in a same plane on said light transmitting support; and
- a binder adhered to at least a circumferential portion of said spheres, said circumferential portion being part of a half of said spheres which faces said plane;

wherein said individual passing areas respectively correspond to said light transmitting spheres and are separated by said low-passing area, such that portions of said passing area and a portion of said low-passing area are disposed past said spheres in a passing direction of the collimated light.

35. *(New)* The light diffusing plate according to claim 34, wherein the light diffusing plate comprises a diffusing layer formed on said light transmitting support; wherein said light transmitting spheres are fixed to the light transmitting support with said binder, which is a light absorptive binder and constitutes a portion of said low-passing area.